

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (previously presented) A titania nanotube having a length of 10 μm or more.
2. (original) The titania nanotube according to Claim 1 the diameter is 0.1 μm or less.
3. (original) The titania nanotube according to Claim 1 or 2 wherein the aspect ratio is 100 or more.
4. (previously presented) A sensor having the titania nanotube according to Claim 1 or 2 and an electrode in which the titania nanotube and the electrode are connected.
5. (previously presented) A method for producing the titania nanotube of Claim 1, comprising a step of dispersing a titania powder in a sodium hydroxide aqueous solution at a temperature of 60°C or more.
6. (original) The method according to Claim 5 wherein the titania powder has an average particle diameter of 50 nm or less.

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7. (original) The method according to Claim 5 or 6 wherein the amount of the titania powder is 0.01 part by weight or more and 0.1 part by weight or less based on 100 parts by weight of a sodium hydroxide aqueous solution.

8. (previously presented) The method according to Claim 5 or 6, wherein the sodium hydroxide aqueous solution has a concentration of sodium hydroxide of 1 M or more and 15 M or less.

9. (original) The method according to Claim 8 wherein the sodium hydroxide aqueous solution has a concentration of sodium hydroxide of 3 M or more and 13 M or less.

10. (original) The method according to Claim 9 wherein the sodium hydroxide aqueous solution has a concentration of sodium hydroxide of 7 M or more and 12 M or less.

11. (previously presented) The method according to Claim 5, wherein dispersion is conducted at 90°C or more and 120°C or less.

12. (previously presented) The method according to Claim 5, wherein dispersion is conducted by stirring or irradiation with an ultrasonics.

13. (original) The method according to Claim 12 wherein dispersion is conducted by stirring.

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14. (previously presented) A sensor having the titania nanotube according to Claim 3 and an electrode in which the titania nanotube and the electrode are connected.

15. (previously presented) The method according to Claim 7, wherein the sodium hydroxide aqueous solution has a concentration of sodium hydroxide of 1 M or more and 15 M or less.

16. (new) The titania nanotube according to Claim 1 having a length of 10 mm or less.